

UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF ENTOMOLOGY

FOREST INSECT INVESTIGATIONS

ANNUAL INSECT INFESTATION SURVEY OF
THE WHITE PINE STAND OF THE
COEUR D'ALENE NATIONAL FOREST
1936

By
T. T. Terrell
Scientific Aide

Forest Insect Laboratory
Coeur d'Alene, Idaho
Nov. 18, 1936

S
Insect Control
Coeur d'Alene

December 31, 1936

ROUTED IN ENVELOPE

Mr. James C. Evenden,
Forest Insect Laboratory,
Coeur d'Alene, Idaho.

Dear Mr. Evenden:

I have just gotten around to reading the report on the 1936 Coeur d'Alene insect survey. The situation on the Coeur d'Alene seems to be very gratifying, and I hope that no further control work will be necessary for some time. Your cooperation in handling this survey is greatly appreciated.

Very sincerely yours,

ELERS KOCH

ELERS KOCH,
Assistant Regional Forester

Copy *sent* Coeur d'Alene

J. M. T.

UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

WASHINGTON, D.C.

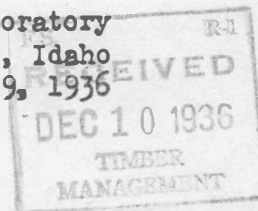
Forest Insect Laboratory

Coeur d'Alene, Idaho

Dec. 9, 1936

Refer to file

Project C-1



Regional Forester

Federal Building

Missoula, Montana

Attention: Mr. Koch

Dear Sir:

There is enclosed copy of Mr. Terrell's report of the 1936 Coeur d'Alene survey, which we trust will be satisfactory to you.

Your comments relative to the conclusions drawn as a result of this survey will be appreciated.

Very truly yours,

James C. Evenden
Entomologist

cc to Forest Supervisor

ANNUAL INSECT INFESTATION SURVEY OF
THE WHITE PINE STAND OF THE
COEUR D'ALENE NATIONAL FOREST
1936

The eighth annual survey of the mountain pine beetle infestation in the white pine stands of the Coeur d'Alene Forest started August 19th and finished September 24, 1936. The survey was conducted to determine the present status of the mountain pine beetle infestation which has been followed by annual cruises for the past eight years. Examinations of 5,288 acres of sample strip gave a 4.6 percent cruise of the stands. The survey was made by examining all white pine trees on strips one chain in width, which were projected through the stands at approximately twenty-chain intervals. Records were taken on each ten chains of strip as to the number of infested trees and windfalls, their diameters, number of attacks per square foot at the base, and notes on root infection as well as the total number of green trees encountered. Data of this nature were necessary in order to determine the percent of the stand infested. The type and condition of the attacked trees, and the character of the infestation.

The following tables present the number of mountain pine beetle-infested white pine per acre found on the 33 forest units, with comparable data from the 1935 survey.

Table I

LITTLE RIVER DISTRICT

Unit	Acres	New Attacks Per Acre							Increase	Infested trees
		1935			1936					
		Stand	Wind-fall	Total	Stand	Wind-fall	Total			
Forks	1,100	.055	.222	.277	.013	.013	.026	-91	28	
Tom Lavin	3,000	.026	.032	.058	.050	.011	.061	+ 5	183	
Iron Cr.	4,120	.323	.005	.328	.038	.004	.042	-87	173	
Cathcart	3,200	.050	.000	.050	.017	.006	.023	-54	73	
Cascade	3,640	.169	.032	.201	.077	.023	.100	-50	364	
Picnic Cr.	1,680	.089	.000	.089	.067	.000	.067	-25	113	
Honeysuckle	5,320	.143	.032	.175	.073	.043	.116	-34	617	
Leiberg	4,440	.094	.020	.114	.007	.007	.014	-88	62	
Laverne	2,560	.125	.021	.146	.044	.033	.077	-47	197	
Copper Cr.	4,000	.124	.020	.144	.000	.000	.000	-100	0	
Total Little River Unit	33,060	.132	.027	.159	.039	.015	.054	-66	1,810	

GRIZZLY MOUNTAIN DISTRICT

Taylors	2,800	.115	.020	.135	.017	.000	.017	-87	48
Fork Cabin	5,440	.194	.030	.224	.029	.000	.029	-87	158
Can Cr.	1,760	.188	.012	.200	.018	.000	.018	-91	32
West Fork	3,960	.084	.014	.098	.029	.008	.037	-62	147
Clay Cr.	2,320	.203	.068	.271	.059	.000	.059	-78	137
Lower Cougar	3,600	.162	.014	.176	.033	.000	.033	-81	119
Upper Cougar	3,700	.087	.033	.120	.019	.019	.038	-68	140
Bumble Bee	3,040	.146	.000	.146	.019	.000	.019	-87	58
Total	26,620	.145	.023	.168	.028	.004	.032	-81	839

Table I Cont.

SHOSHONE DISTRICT

Unit	Acres	New Attacks per Acre							Increase	Infested trees 1936
		1935			1936					
		Stand	Wind-fall	Total	Stand	Wind-fall	Total			
Sissons	4,700	.296	.010	.306	.092	.007	.099	-68	465	
Yellow Dog River	2,140	.467	.033	.500	.188	.045	.233	-53	498	
Yellow Dog Creek	4,120	.086	.053	.139	.089	.040	.129	-7	532	
Downey Cr.	4,160	.300	.083	.383	.069	.009	.078	-80	324	
N. Yellow Dog	840	.683	.117	.800	.034	.000	.034	-96	29	
Lower Flat Creek	4,120	.007	.019	.026	.023	.000	.023	-11	95	
Bennett Cr.	580	.178	.036	.214	.037	.000	.037	-83	21	
Brett-Miner	1,550	.186	.014	.200	.010	.000	.010	-95	15	
Rock City	1,600	.027	.040	.067	.013	.000	.013	-81	21	
Hawksite	8,780	.084	.011	.095	.021	.003	.024	-75	210	
Cabin Cr.	7,000	.186	.037	.223	.045	.003	.048	-78	336	
Total	39,590	.179	.033	.212	.055	.009	.064	-70	2,546	

FORKS DISTRICT

Big Elk	4,960	.149	.035	.184	.039	.023	.062	-66		307
Potter Cr.	3,800	.267	.062	.329	.083	.017	.100	-70		380
Stewart Cr.	2,200	.073	.000	.073	.015	.008	.023	-68		51
Upper Flat	3,680	.097	.037	.134	.025	.009	.034	-75		125
Total	14,640	.156	.036	.192	.043	.016	.059	-69		863
Grand Total	113,910	.154	.029	.183	.042	.011	.053	-71		6,058

A 71 percent reduction has occurred on the forest as a whole, and all infested areas except one unit (Tom Lavin) have shown decreases. No sample strips were run in the Falls Creek, West Eagle or East Eagle units. However, cursory examinations showed no infested trees.

The condition on the forest as a whole seems very favorable and no doubt can be considered as a definite turning point in the infestation. The infestation throughout the forest decreased to a marked extent, and the attacks per individual tree are much lower than in 1935. A majority of the attacks seem to have occurred early in the season, and the broods in these trees show a high mortality and an abundance of parasitism. A large number of pitched-out attacks were encountered, and although a few such trees were always found on past surveys, they were encountered in far greater numbers on the 1936 survey than formerly.

The following table presents a summary of the infestation existing on the forest for the past nine years.

Table II

COEUR D'ALENE FOREST SUMMARY

	: 1928 :	1929 :	1930 :	1931 :	1932 :	1933 :	1934 :	1935 :	1936 :
Acres surveyed *	: 9,000 :	99,540 :	107,830 :	127,550 :	127,430 :	124,320 :	118,410 :	113,910 :	113,910 :
New attacks per acre	: .278 :	.300 :	.087 :	.098 :	.118 :	.157 :	.207 :	.184 :	.053 :
Percent of increase	: No data :	No comparison :	-71 :	+13 :	+20 :	+33 :	+32 :	-11 :	-71 :
Percent windfalls	: No data :	No data :	No data :	56 :	50 :	51 :	47 :	16 :	21 :
Infested trees	: 2,500 :	29,881 :	9,371 :	12,496 :	1,100 c.l.: 14,457 :	19,520 :	24,466 :	20,952 :	6,058 :
Acres recommended for control	: 9,000 :	99,540 :	61,770 :	52,120 :	32,940 :	3,200 :	23,880 :	None :	None :
Trees estimated for treatment	: 2,500 :	25,904 :	6,801 :	8,717 :	1,100 c.l.: 6,757 :	1,281 :	6,725 :	None :	None :
Year in which control was conducted	: 1929 :	1930 :	1930 Fall: 1931 :	1932 :	1932 Fall: 1933 :	1933 Fall :	1935 :	:	:
Acres treated	: 5,620 :	73,210 :	39,180 :	40,666 :	27,204 :	3,622 :	9,213 :	:	:
Trees treated	: 1,074 :	22,926 :	7,106 :	270 c.l.: 7,906 :	1,135 c.l.: 6,434 :	186 Med.: 877 :	2,834: 283 Med.:	156 Med.:	:

c.l. - Cull logs (2 c.l.--1 tree for comparison)

Med. - Treated by experimental medication

* The surveyed acreage shows a variation, because in some instances new areas were found to be infested and were added; other areas were logged off or burned over and therefore dropped.

In the cost analysis of the 1936 survey is included the labor and subsistence charge for one and one-half days spent on the Twelve Mile drainage of the Cabinet Forest, a memorandum of which was submitted by Mr. Bedard.

COST ANALYSIS OF THE 1936 SURVEY

	Coeur d'Alene Forest	Cabinet Forest
Transportation	\$92.18	
Subsistence	370.75	\$10.61
Wages	1,459.38	40.48
Misc. and Equipment	28.37	
Terrell's salary, 1 1/2 months	<u>262.50</u>	
Total field cost	\$2,213.18	\$51.09

Effective man-days	208	7
Noneffective man-days		
45 cook, 13 training, 4 office,		
42 rain, 70 leave and holidays,		
WPA 36	210	3
Supervision	<u>26</u>	
Total Man-days	444	10

Cost per acre surveyed (113,910)	\$0.019	
Miles of sample strip	661	
Miles of sample strip per effective man-day	3.18	

The Coeur d'Alene survey was conducted with a seven-man crew under the supervision of the writer. The crew was transported by a 1 1/2-ton, stake-body truck rented on a monthly basis from the Forest Service, and a station wagon contributed to the project by the Coeur d'Alene Laboratory. A cook and one WPA truck driver were employed throughout the job. Although the use of a truck driver is not ordinarily recommended, it proved an advantage in that no time was lost in moving camp.

Some difficulty was experienced in obtaining a crew of experienced men for the survey, as many of the former members of the survey parties were engaged in other forest projects in a supervisory capacity. However, four men with past experience in insect surveys were employed and four with past woods experience were trained for the work.

The following men made up the crew which proved a very satisfactory one:

James Doyle	Asst. Chief of Party
Carrol Heath	Field Assistant
Charles Needham	" "
Donald Peterson	" "
Glen Richardson	" "
Clarence Skauge	" "
* Harry Scarborough	" "
Theodore Thatcher	" "
Earl Prosser	Cook
Earl Hammond	Truck Driver

* Mr. Scarborough replaced Carrol Heath when the latter returned to school.

Respectfully submitted,

T. T. Terrell
Chief of Party